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# (12) UK Patent Application (19) GB (11) 2 141 907 A

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(58) Field of search

H4T  
G5C

(54) Video games with advertising facility

(57) A method of operating a video game apparatus which is normally operative to generate signals for activating a video display representing a game and to move through the stages of a game under the control of one or more players which includes the step of also controlling the video game apparatus so that it visually reproduces advertising information either at times when the game is not being played, or at intervals in a game, or during the course of a game. In one form of the apparatus, advertising material is stored on a video player 9, which could be a standard video cassette player, a video disk player, or a custom built machine. When a game is being played, the control electronics 10 switches the tv screen 6 to show the output from the game circuitry 1, 2, 3 and 7. When a game is not being played, the control electronics 10 switches over the tv screen 6 to the video player in order to display the advertising material. The advertising material may be incorporated into the game sequence.

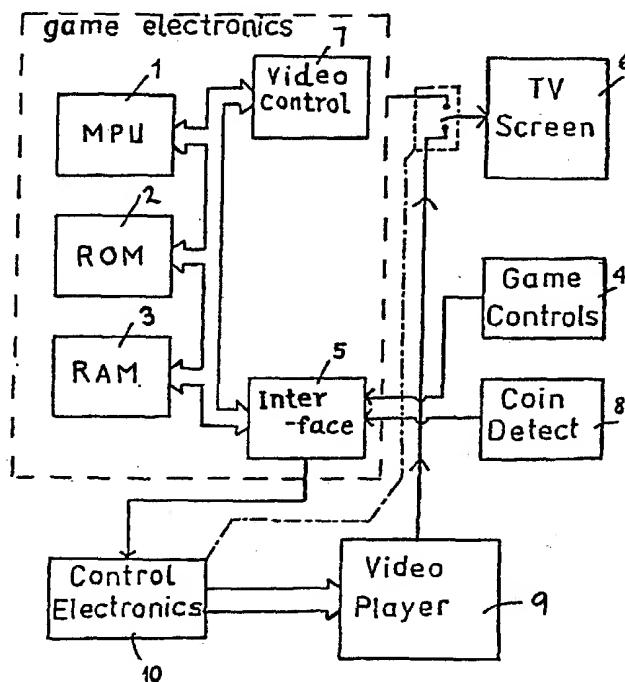


Fig.2

The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1982.

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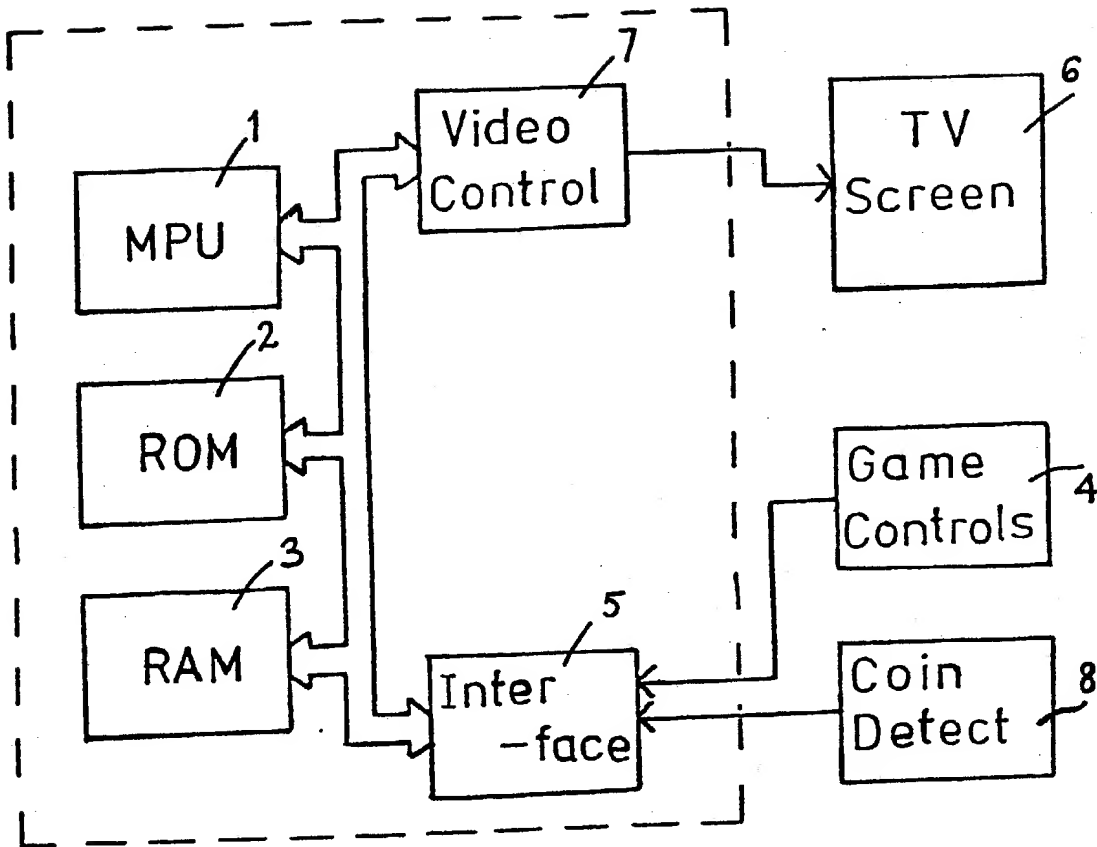


Fig.1

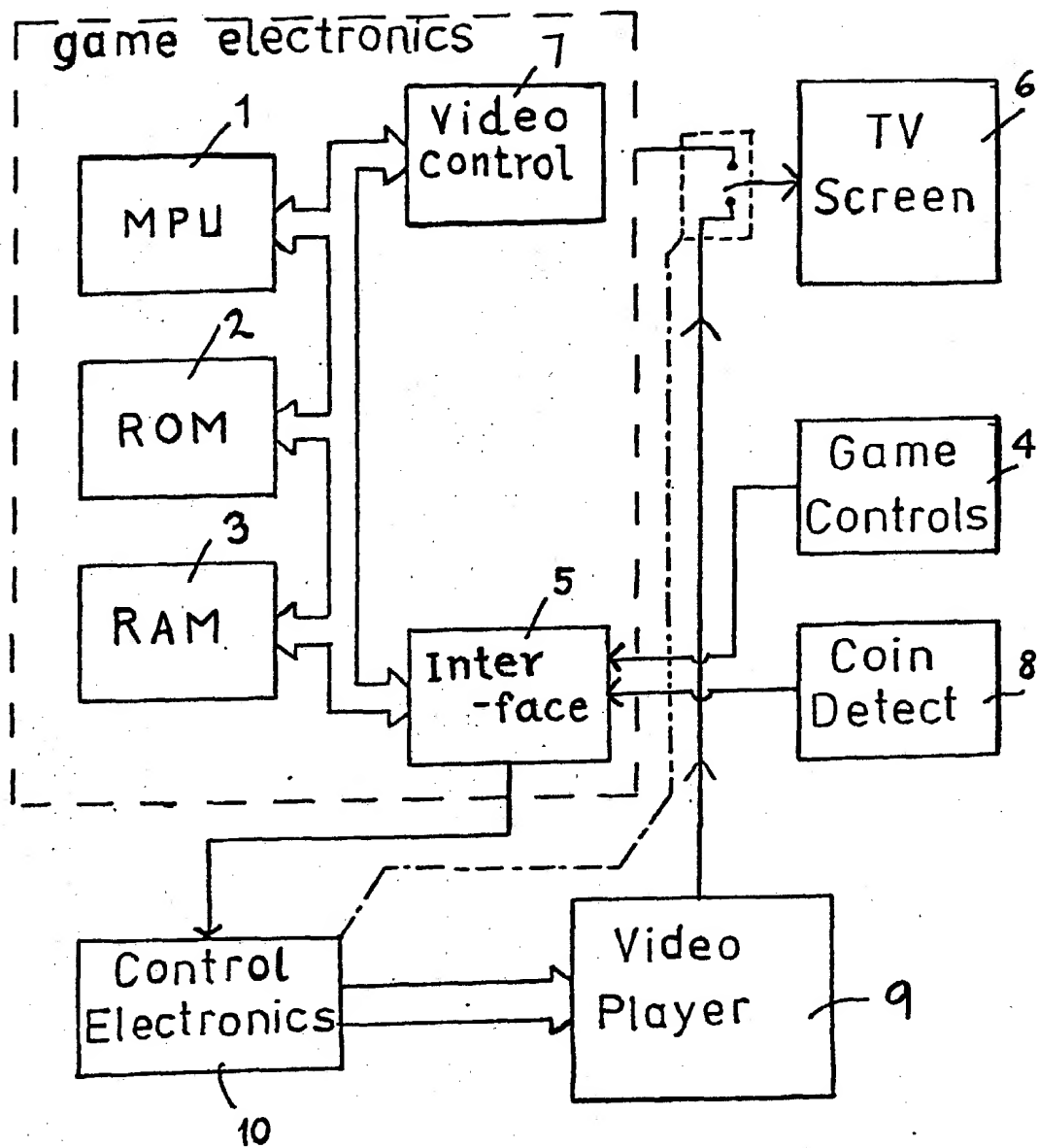


Fig.2

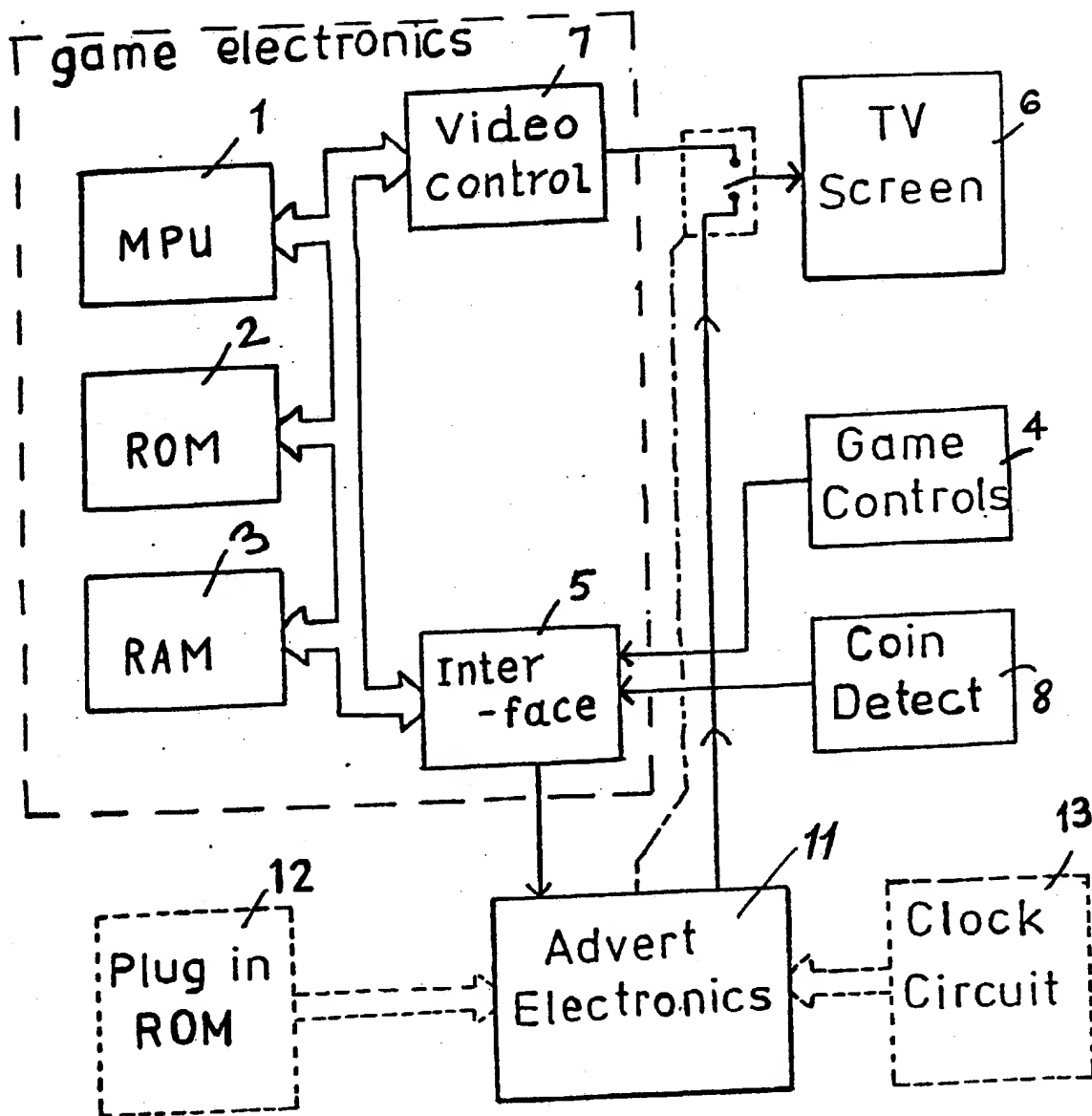


Fig. 3

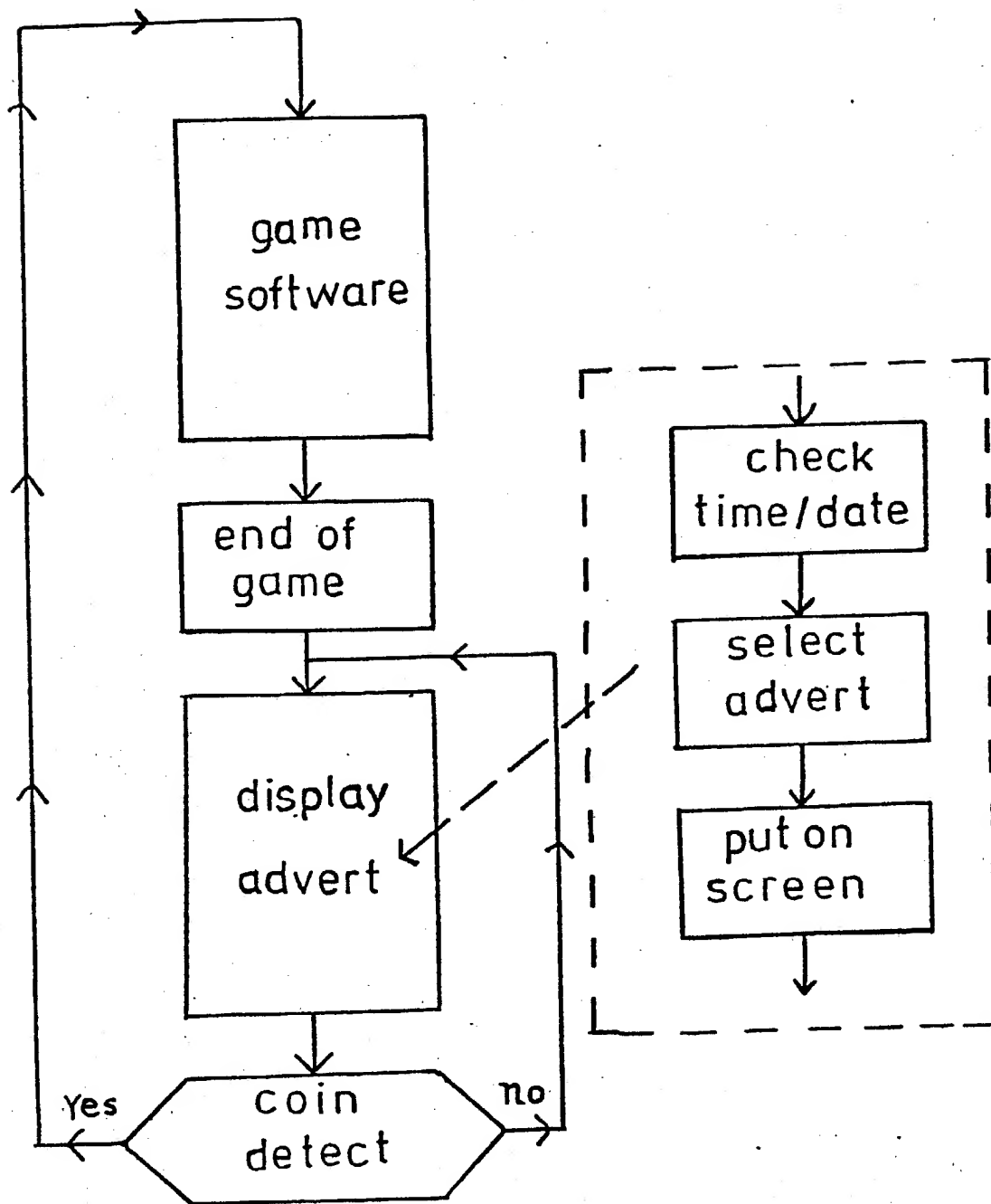


Fig.4

## SPECIFICATION

## Improvements in video games

The present invention relates to video games which are currently in widespread use for amusement and entertainment.

Video game apparatus may take various forms. Thus the apparatus may be a particular self-contained piece of equipment with its own video display unit, in the form of e.g. a console or table, which is situated in a public place such as a club, public house or amusement arcade. Such apparatus is generally coin-operated.

Alternatively, the apparatus may be designed as a unit for use with a small computer, e.g. a home computer, which enables the user of the computer to play one or more video games and employs the video display unit of the computer for displaying the video game. As a further alternative a video game apparatus may be in the form of a unit designed for use with a domestic television receiver, in which case the screen of the television tube is employed for displaying the video game.

The present invention may be embodied as a part of any of the above mentioned forms of video game apparatus and enables the video game apparatus to be more fully utilised.

From one aspect the invention provides a method of operating video game apparatus in which the video game apparatus is organised such that game periods are interspersed with information display periods.

From another aspect the invention provides video game apparatus for playing one or more video games in which said apparatus includes means for enabling the display of information other than a video game being played.

The information display periods may occur when a game is not being played or during intervals of the game or during both of these times.

More specifically, the information displayed is advertising information, taken in its broadest sense. Thus, the advertising information may be of a commercial nature, such as the advertising of a product or customer service, or of a more generally informative nature, such as announcements regarding entertainments, travel schedules, or other services.

From yet another aspect the present invention provides a method of operating a video game apparatus which is normally operative to generate signals for activating a video display representing a game and to move through the stages of a game under the control of one or more players which includes the step of also controlling the video game apparatus so that it visually reproduces advertising information either at times when a game is not being played, or at intervals in a game, or during the course of a game.

The invention further provides video game apparatus capable of playing one or more visually displayed games under the control of one or more players wherein said apparatus includes means for generating and visually displaying advertising

material on the same visual display device as the game is displayed when a game is not being played and/or during intervals in the game.

According to a first method of carrying out the present invention the information or material to be displayed may be stored on a video player and inserted into the video game apparatus during times when the game is not being played.

According to a second method of carrying out the present invention the information or material to be displayed is electronically generated and is then displayed on the screen of the video game apparatus at times when the game is not being played or at intervals during the game. The information or material may be stored in a separate memory for example a read only memory.

The display may take various formats, for example it may employ graphics of the type which are used for the Prestel (RTM) and Ceefax (RTM) systems. An alternative format is a pure graphic display in which each point on the screen is separately assigned its colour and brightness. As a further alternative use may be made of "sprite" oriented graphics such as are already used in the creation of video games.

According to a third method of carrying out the present invention the same circuitry may be employed both for the video game and for the information or material to be displayed.

The invention will now be further described by way of example with reference to the accompanying drawings, in which:—

Figure 1 is a block diagram of a typical video game apparatus,

Figure 2 is a block diagram showing the apparatus of Fig. 1 modified according to one embodiment of the present invention,

Figure 3 is a block diagram showing the apparatus of Fig. 1 modified according to a second embodiment of the invention, and

Figure 4 is a diagram illustrating a further embodiment according to the invention.

One typical arrangement of hardware for a video game is shown in Figure 1. When a player inserts a coin, the microprocessor 1 starts to run the game program which is stored in a read only memory 2. Once installed, the rom cannot be changed. A random access memory 3 is used to store variables such as the players score and some television screen ram which is updated by the mpu 1 as the game progresses. The various controls 4 on the front of the machine are interfaced at 5 to the microprocessor, allowing the player to take part in the game. A television display screen 6 is controlled by the video control circuitry 7 from the mpu 1. The coin detect circuit for initiating a game is shown at 8.

In practice the hardware can differ significantly from that shown in Fig. 1. For example, the mpu 1, rom 2 and ram 3 may be combined in a single package. The mpu 1 may do most of the interfacing to the controls 4 and the television screen 6 itself.

Figure 2 illustrates the video game apparatus of

Figure 1 as modified according to one embodiment of the present invention (Method 1).

Advertising material is stored on the video player 9, which could be a standard video cassette player, a video disk player, or some custom built machine. When a game is being played, the control electronics 10 switches the tv screen 6 to show the output from the game circuitry. When the machine is free, the electronics would switch over the tv screen 6 to the video player in order to display the advertising material.

The only links between the advertising and the game hardware are the control signals and the switching of the video output. Two control signals are provided, one to indicate when a coin is inserted and the other to show whether a game is being played or not. If desired these two signals can be combined. These signals also ensure that adverts do not interrupt a game and also allow a game to be played while an advert is being shown.

Such an embodiment is particularly advantageous where there are many video games machines in one area, e.g. in an amusement arcade. In such cases all the machines may be connected to one video player via a video cable so that advertising material can appear on all of the machines when not in use.

Figure 3 shows an embodiment (Method 2) again based on the video game apparatus of Figure 1 in which the advertising material is stored in memory 11 and displayed using electronic hardware. The electronics require the same links with the game as in the previous embodiment as well as being able to control the video screen. The electronic circuitry may be somewhat similar to the electronics of the video games with a program in rom being run by the microprocessor to control the video display. Advertising material may be stored in a separate rom 12 which ideally is easily exchangeable.

Figure 3 shows two possible options to this system. One is to use plug in rom's so that adverts can be changed on site. The other option is to include a clock/calendar circuit 13.

The clock/calendar facility could be added to any of the methods used to display advertisements. It needs a separate power supply to ensure that the time and date are not lost when the machine is switched off. With this option it is then possible for adverts to be scheduled for different times of the day and different parts of the year. This opens up possibilities for seasonal advertising, e.g. for Christmas, Easter, mothers day, etc.

It is possible to use the same electronics for both the video games and for advertising. Figure 4 shows a flow chart of the software used in this method (Method 3). After the game has finished, the advertising software is run. This determines which advert is to be shown and puts it on the screen. If a coin is entered then the machine is interrupted and the machine returns to the games program.

The advantage of this method is that the

advertising product(s) can be used within the game, for example space invaders can be seen to be revitalised by a 'lager' if the player is good enough to defend the earth from the second wave of aliens etc. A further consequence of this combined game and advertisements is that the adverts have a captured audience and do not have to rely upon the temperament of the player.

This method also lends itself to be taken away from the amusement arcade machine audience and into the home, where there is a rapidly growing market of personal computer enthusiasts. New games can be written around advertising products, (one type of game, the treasure seeking adventure type, stands out in particular) or home computer games companies can advertise their complete range of games for that particular home computer.

There are a number of other possibilities embodying the present invention besides the three embodiments already described, as well as variations on these. One possible system is to store the advertising material in ram rather than rom. This would mean having a back-up power supply, to avoid data being lost when the machine is switched off. However if this is done, adverts can be put onto the machine via a cable link. For example adverts may be stored in computer coded form on cassettes, and these cassettes played off a portable machine into the memory of the video game machine. This is the same method as used in most home computers.

There are several ways in which advertising time or space on the video games machine can be organised, using methods 2 or 3 for advertising. The simplest approach is to install a single advert on the machine which would remain a permanent feature of the machine.

A number of other options are available. Firstly several adverts could be put onto the machine. When an advert is to be shown, the hardware would select one of the adverts. Advertisers would thus buy a certain number of 'slots' on the machine.

A further refinement is achieved by the inclusion of a clock/calendar in the machine. This enables advertisers to select what percentage of the advertising time they require for different parts of the day. In addition adverts may be set to coincide with other advertising campaigns and for certain seasonal products.

These methods require some form of liaison between the games manufacture and the advertiser as the adverts need to be encoded into the machine when they are programmed.

Alternatively advertising material can be stored on the machine in such a way that it can be replaced on site, allowing adverts to be updated at regular intervals, using one of the methods already described i.e. Plug-in rom packs. This enables the complete operation, of collection adverts, realising them in software and installing them in the machine, to be performed by a single company. This may enable these facilities to be localised, to



satisfy the needs of the small local advertisers, perhaps by franchising out the programming facilities.

5 The realisation of the adverts in graphical form may be greatly eased if some form of software graphics standard is adopted. This may consist of a set of graphics subroutines contained in the advertising hardware, which are utilised by the plug-in advertising software, facilitating the  
10 simple exchange of plug-in packs between machines.

It will be clear that various further modifications may be made without departing from the scope of this invention.

15 It will thus be seen that the present invention provides a method and apparatus which enables a more comprehensive and commercially advantageous use of video game apparatus to be obtained.

## 20 CLAIMS

1. A method of operating video game apparatus in which the video game apparatus is organised such that game periods are interspersed with information display periods.

25 2. A method as claimed in claim 1, wherein the information display periods occur when the game is not being played.

30 3. A method as claimed in claim 1, wherein the information display periods occur during intervals of the game being played.

4. A method as claimed in claim 1, wherein the information display periods occur during the course of a game.

35 5. A method as claimed in claim 1, 2, 3 or 4, wherein the information displayed is advertising material.

40 6. A method of operating a video game apparatus which is normally operative to generate signals for activating a video display representing a game and to move through the stages of a game under the control of one or more players which includes the step of also controlling the video game apparatus so that it visually reproduces advertising information either at times when a  
45 game is not being played, or at intervals in a game, or during the course of a game.

50 7. A method as claimed in any preceding claim, wherein the information to be displayed is stored on a video player and inserted into the video game apparatus at the desired time or times.

55 8. A method as claimed in any of the preceding claims 1 to 6, wherein the information to be displayed is electronically generated and is then displayed on the screen of the video game apparatus at the desired time or times.

9. A method as claimed in claim 8, wherein the information or material is stored in a read only memory.

60 10. A method as claimed in claim 8, wherein the information or material to be displayed is

stored in a random access memory.

65 11. A method according to any of the preceding claims 1 to 6, wherein the same circuitry is employed both for the video game and for the information to be displayed.

70 12. A method as claimed in any preceding claim, wherein a plurality of advertisements are displayed each at a different time according to a predetermined programme.

13. Methods of operating video game apparatus substantially as hereinbefore described with reference to Figs. 2 to 4 of the accompanying drawings.

75 14. Video game apparatus for playing one or more video games in which said apparatus includes means for enabling the display of information other than a video game being played.

80 15. Apparatus as claimed in claim 14, including means for displaying information when the game is not being played.

16. Apparatus as claimed in claim 14, including means for displaying information during intervals of the game being played.

85 17. Apparatus as claimed in claim 14, including means for displaying information during the course of a game.

90 18. Video game apparatus capable of playing one or more visually displayed games under the control of one or more players wherein said apparatus includes means for generating and visually displaying advertising material on the same visual display device as the game is displayed when a game is not being played and/or  
95 during intervals in the game and/or during the course of a game.

19. Apparatus as claimed in any of claims 14 to 18, wherein the information to be displayed is stored on a video record carrier.

100 20. Apparatus as claimed in any of claims 14 to 18, wherein the information to be displayed is stored in a read only memory or a random access memory.

105 21. Apparatus as claimed in claim 19 or 20, wherein the stored information can be distributed as desired to a plurality of video game apparatuses.

110 22. Apparatus as claimed in claim 19 or 20, in which the storage means is interchangeable with other storage means bearing different information to be displayed.

115 23. Apparatus as claimed in any of the preceding claims 14 to 22, including means for controlling the display of different information at different times according to a predetermined programme.

120 24. Apparatus as claimed in any of claims 14 to 18, wherein the same electronic circuitry is employed for playing a game and for displaying advertising material and is controlled by appropriate software.

25. Apparatus as claimed in any of claims 14 to 24, including a video display device in the form of

a cathode ray tube.

26. Video game apparatus substantially as

hereinbefore described, with reference to Figs. 2 to 4 of the accompanying drawings.

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